

THE DODGE CITY TIMES.

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N. B. KLAINE, Editor and Publisher.

IRRIGATION SYSTEMS OF DIFFERENT COUNTRIES.

It has long been evident that the earlier estimates of the productive capacity of the trans-Mississippi region were fallacious, ignoring important facts and principles which are now coming into general notice. The errors resulted from the hasty generalizations of limited farming experience in the older States, applied to new and imperfectly understood conditions of soil, climate, topography and chorography. In Dr. Hayden's report of the late geological survey of Wyoming Territory, Professor Cyrus Thomas, whose special function was the observation of the agricultural character of that region, gives the following general estimate:

Starting as the statement may appear to those who have swept across the continent along the barren-looking track of the Union Pacific railroad, I assert it as my firm conviction that there are but few lands in all this portion of this country that are really unproductive; that wherever there is soil, if water can be applied to it, it will be found rich in all the primary elements necessary to the production of useful crops of some kind. Without water, as a matter of course, it cannot be made to yield, and the crops produced will vary with the climate; but these facts do not affect the position I take in regard to the primitive fertility of the soil.

In studying the agricultural capacity of this region, this writer says it is "necessary to lay aside, to a great extent, all our ideas of agriculture based upon experience in the States." He finds not only climatic and topographical peculiarities, but also "thermometric and hydrometric conditions bearing no such relations to vegetation there as here."

Hence, he argues, the criteria by which we judge of the fertility and productiveness of the soil, and of its adaptation to given products, (except, perhaps, the strictly chemical test) do not hold good here. The pale appearance of the soil, the barren look and stunted growth of a spot, are by no means conclusive evidence of its sterility, for the application of water may show it to be rich in vegetable force. Plants which are considered as incompatible in other sections are here found growing side by side, while others usually associated are here never, or but seldom, found together. Even the constant latitudes and elevation—cannot always be taken as true indices of temperature and vegetable life, on account of strong counteracting local influences.

The grand fertilizing element that is to unlock the latent resources of productive power throughout this region is water. Among a large number of instances of its successful application, Mr. Thomas states that the little valley of the upper Arkansas, "nestling high among the snow-covered granite peaks of the Rocky Mountains," and "covered with the rough local drift from the barren metamorphic peaks around it," yields rich crops of cereals, potatoes, etc. "The fossil-bearing deposits in the Bridger Basin, on account of their worn, washed, and barren appearance, have been compared with the Mesquites Terraces of Dakota, and have generally been considered by travelers as utterly worthless in an agricultural point of view; yet the productive farms along Smith's Fork will convince the most incredulous of the error of this opinion." All the hardier vegetables grow along the tributaries of Wind river. The garrison at Fort Saunders produce their own vegetables in abundance. Professor Thomas further states that "prolonged experiments have shown that even spots so thickly frosted over with alkaline deposits as to destroy vegetable and animal life can be rendered fertile and made to produce abundant crops." As a final illustration, he refers to the successful cultivation inaugurated by the skilled and patient industry of the Moros among the drifting sands and basaltic hills of the Rio Virgin.

Facts of this character might be multiplied to show that the mountain regions west of the Mississippi, with artificial irrigation to supply the local deficiency of rain-

fall, may yet become the sphere of a unique and productive agriculture. The question of fertility, then, resolves itself into one of capacity for irrigation. Where facilities for the easy application of water exist, local enterprise, with a trifling outlay of capital and labor, has already redeemed large areas till lately condemned as hopeless deserts. In other localities, however, the elements of the problem may not be so readily discovered. A wider range of facts and principles must be combined with professional engineering science and skill, in order to devise and execute a general system of irrigation. Some of the elements of this investigation are accumulating in books and periodicals constantly issuing from the press, in which different portions of the trans-Mississippi region are illustrated. But a systematic agricultural survey alone can reveal the fundamental conditions of such a general system. Many years ago the enlightened policy of the Government projected an extensive and elaborate system of surveys of this region, for the purpose of testing the feasibility of trans-continental railways. The interests involved in productive agriculture are at least equal in importance to the commercial considerations which prompted the Pacific railroad explorations. The expenditures of a tithe of what those explorations cost, in the systematic survey of the same regions with reference to their agricultural resources, and especially their capacity for irrigation, would be justified by results no less valuable to civilization. The admirable reports of the geological reconnaissance of a portion of this Territory, conducted by Dr. Hayden and his associates, show that very great results may be secured by the judicious expenditure of a small sum of money. It is not to be expected, however, that the tide of immigration will await the slow movements of Government. The process of irrigation will be applied by private enterprise to particular localities, as the wants of increasing settlements demands, and results that might be readily and cheaply arrived at by a preliminary survey, will finally be demonstrated in a series of disastrous experiments, such as marked the earlier history of mining industry in the same regions.

(To be continued.)

REMOVAL.

Mrs. A. L. Robbins and Mrs. Mullen have purchased the stock of MILLINERY GOODS of Mrs. L. K. McIntyre, and have removed the same to the building opposite the signal office, where they will be pleased to meet customers. Dress making also carried on.

Letter heads, note heads, bill heads, envelopes, statements, Yankee statements, business cards, calling cards, invitations, dogers, circulars, posters, etc., printed on short notice at this office.

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U. S. LAND OFFICE,
Larned, Kansas November 21, 1892.
Notice is hereby given that the following named settler has filed notice of her intention to make final proof in support of her claim, and that said proof will be made before the Clerk of District Court, Ford county, Kansas, at the county seat, on Monday, December 25th., 1892, viz:
NANCY B. MARTIN, widow of John B. Martin and administratrix of his estate, homestead entry No. 4935, for the Southeast quarter sec 24 twp 26 S 26 W.
She names the following witnesses to prove her continuous residence upon and cultivation of said land, viz: H. M. Beverley, N. B. Kline, H. P. Niess, R. P. Adams, all of Dodge City, P. O., Ford county Kas.
C. A. MORRIS, Register.

SHERIFF'S SALE.
STATE OF KANSAS, ss.
Ford County.
Joel Stone, vs.
Emil Heinig and Augusta Heinig.
BY VIRTUE OF AN ORDER OF SALE to me directed and delivered, issued out of the District Court of the state of Kansas, sitting in and for Ford county, in said state, I will, on THE 7th DAY OF FEBRUARY, A. D., 1893, between the hours of 10 o'clock a. m. and 4 o'clock p. m. of said day, at the court house door in Dodge City in the county and state aforesaid, offer at public sale and sell to the highest bidder, for cash in hand, the following described real property, to-wit:
The NW. quarter of sec. No. 35, Tp. No. 25 R. No. 22, W. containing 160 acres.
Taken as the property of Emil Heinig and Augusta Heinig to satisfy a mortgage lien given by the said Emil Heinig and Augusta Heinig to Joel Stone, on which there remains due and unpaid the sum of \$462.00 and costs of this action, said property to be sold as commanded by the said order of sale.
GEO. T. HINKEL, Sheriff.

NOTICE.
T. F. Leidigh, vs.
Ed. Frank.
Before H. M. Clark, Justice of the Peace, Spearville Township, Ford county, Kansas.
Said defendant is hereby notified that on the 11th day of November, 1892, a summons of garnishment for the sum of fifteen and 90-100 dollars, was issued by the above named justice of the peace against his wages due from the A. T. & S. F. R. R. Co., and that said cause will be heard on the 18th day of December, 1892, at 10 o'clock a. m.
T. F. LEIDIGH, Plaintiff.
Attorn: H. M. CLARK, Justice of the Peace.
no 16-3t

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